MODIS TECHNICAL TEAM MEETING

December 1, 1994

The MODIS Technical Team Meeting was chaired by Vince Salomonson. Present were John Barker, Bruce Guenther, David Herring, Dorothy Hall, Bill Barnes, Mike Roberto, Rosemary Vail, Locke Stuart, Joann Harnden, and Yoram Kaufman.

1.0 SCHEDULE OF EVENTS

Dec. 12	MODIS Quarterly Review at GSFC
Dec. 31	Revisions of ATBDs receiving a grade of C or D due to EOS Project Science Office
Jan. 15, 1995	Semi-annual reports due to Barbara Conboy
Jan. 24 - 25, 1995	MODIS Ocean Discipline Group Meeting, in Miami, FL
Jan. 26 - 27, 1995	Workshop on international Calibration/Validation Efforts for EOS Ocean Color Sensors, in Miami, FL
May 2, 1995	MODIS Calibration Working Group (tentative)
May 3 - 5, 1995	MODIS Science Team Meeting (tentative)

2.0 MINUTES OF THE MEETING

2.1 MODIS Project Reports

Roberto announced that Hughes has decided that SBRC's MODIS personnel will remain at SBRC through completion of the Protoflight Model. Therefore, SBRC remains in place until mid-1996.

2.1.1 MODIS Brochure

Salomonson stated that an effort is underway to see if the MODIS Project will be paying the costs for printing the MODIS brochure. It could be expected that they will given that they initiated the idea for such a brochure. The brochure is nearly complete, and will be ready to go to print within a few days.

2.2 MCST Reports

Guenther reported that he attended a briefing last week on the engineering model software testing and analysis, by Rick Sabatino. Guenther said MCST now has a better understanding of how their software works, and he is pleased with it. He expects to receive a beta version of the software around Jan. 10, 1995. Guenther is concerned, however, that the program's test stimulus control module may not be ready by the beta delivery date. He explained that the program runs through OASIS , a high-level system test and control language, and SBRC has recently lost all of their OASIS programmers. As a result, Guenther pointed out, testing for the Engineering Model may be slowed. Numerous operator

interventions (and chances for error) may result if the OASIS software is not in place.

2.3 Study on Maneuvers to View the Moon

Barnes reported the conclusions of an analysis to determine how often MODIS will be able to view the moon (see Attachment 1). The analysis was performed by Brij Gambhir and Jack Shumaker, of SSAI. Barnes stated that MODIS will have one chance per month to see the moon anywhere from one-half to two-thirds illuminated. He showed a table listing the roll angle necessary, for each month from 1998 to 2016, for MODIS to view the moon. No roll angle is greater than 25 degrees. Barnes noted that Chris Scolese, EOS Program Scientist, stated that 25-degree rolls are acceptable.

Guenther observed that given Hugh Kieffer's database characterizing the moon, the MODIS moon views will yield useful data for characterizing MODIS' stability. Barker added that at launch there may be a 15 percent error relative to absolute calibration, but within three years that figure may be down to 2 percent error and, ultimately, within 1 percent, if the moon is used as a vicarious calibration source.

Salomonson asked if MODIS will need moon views every month. Barnes responded that we will know after launch by studying the data. We may, however, get an indication by running the same model on SeaWiFS data.

Barnes noted that Gambhir and Shumaker also examined the possibilities of the EOS AM-1 spacecraft yawing and found that a yaw of about 67.5 degrees would be needed to observe full moon. Such a maneuver would be hard to justify, and its approval would be unlikely. However, EOS AM-1 may need a small yaw maneuver periodically in order for MODIS to view the moon with its whole detector array.

2.4 Options for Adding New Science Team Members

Salomonson asked the Team if they have any ideas or proposals for additional personnel to fill perceived research "holes" within the Science Team. He urged Discipline Group Leaders to discuss the topic with their respective groups and forward any proposals to the MODIS Team Leader so that he may respond to the EOS Senior Project Scientist.

2.5 MODIS Processing Allocation

Regarding MODIS' processing allocation, Salomonson asked the Discipline Group Leaders to meet to develop their official position on the matter, which Salomonson will then carry forward to the EOS Project. He told the Team that John Klineberg, GSFC director, will raise the issue at the EOSDIS Executive Council Meeting on Tuesday.

Salomonson said that EOSDIS Project is now beginning to examine more aggressive technology growth models in scoping the processing capabilities of EOSDIS.

2.6 Science Team Funding

Stuart reported that the first quarter allocation was received and funding orders were forwarded to Procurement for distribution. About half of the total funding for the Science Team was included in this first allotment.

3.0 ACTION ITEMS

3.1 Action Items Carried Forward

1. *MODIS Team*: Determine how, given the MODIS bowtie effect, MODIS images will be produced at launch. [This may be a suitable topic for discussion at the next Science Team Meeting.]
2. *Fleig and Ungar*: Interact with the group leaders prior to developing a MODIS data simulation plan for review at the next Science Team Meeting. [Work on this item is still in progress.]
3. *Masuoka*: Develop a set of comments from MODIS on the third version of the Quality Assurance plan and forward to the Team Leader for review.

4.0 ATTACHMENTS

NOTE: All attachments referenced below are maintained in MODARCH and are available for distribution upon request. Please contact David Herring, MAST Technical Manager, at (301) 286-9515, Code 920, NASA/Goddard Space Flight Center, Greenbelt, MD 20771 if you desire copies of any attachments.

1. "Lunar Viewing Opportunities from the MODIS Space Viewport," by Brij Gambhir and Jack Shumaker